

Emergency Preparedness and the Year 2000 Challenge

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Abstract

The Year 2000 (Y2K) transition created one of the greatest emergency preparedness challenges ever faced by the Federal Emergency Management Agency (FEMA) and State and local emergency management organizations in the United States. This event was unique in the annals of emergency management because it had the potential to affect many different geographical areas and systems simultaneously. FEMA's normal mission of reducing loss of life and property and protecting America's critical infrastructure from all types of disasters made it a key Federal Agency involved in Y2K preparations.

FEMA used an Executive Secretariat, including representatives from all major Agency components, to lead the Y2K program and approached it from three perspectives: information technology; emergency preparedness; and response. This structured management approach was effective, providing coordinated decisions allowing for quick actions on the Agency's part. FEMA also supported the President's Council on Year 2000 Conversion, chairing the Emergency Services Sector Working Group, and leading the Catastrophic Disaster Response Group Federal Departments and Agencies in preparing for potential responses to Y2K consequences. The Y2K transition resulted in few disruptions and was successful in large part because of extensive preparedness, technical assistance, and outreach activities on the part of FEMA and many other organizations.

Introduction

The disruption of computer-based systems as a result of the "millennium bug" posed a potentially serious risk to the continuity of operations of government agencies, public utilities, and businesses, as well as to the well being of individual citizens. Preparing computer systems for the century date change was perhaps the greatest leadership, command and control, and management challenge the world has faced since World War II. While the actual mechanics of making sure that a single computer system could accurately process data into the Year 2000 was relatively straightforward, the entire process of identifying, fixing, and testing a myriad of systems and data exchange points consumed an extraordinary amount of time, energy, and money.

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Tackling the Y2K problem also presented one of the greatest management, leadership, and command and control challenges in emergency preparedness the Federal Emergency Management Agency (FEMA) has ever faced. The importance of careful contingency and consequence management planning emerged as being critical to guarding against the possibility of disruptions and remaining prepared to deal with any consequences. At FEMA, Y2K was labeled the “un-natural hazard,” and “hazard of the year.” Notwithstanding this, there was a silver lining for FEMA and its emergency management partners because preparing for Y2K presented an unprecedented opportunity to heighten awareness across the nation and around the globe about the importance of being prepared not only for Y2K, but for all disasters and emergencies, no matter what the cause. FEMA’s message was more widely heard than ever before.

Partnerships in Emergency Management

FEMA’s normal day-to-day mission is to reduce loss of life and property and protect America’s critical infrastructure from all types of hazards through a comprehensive, risk-based, emergency management program of mitigation, preparedness, response and recovery. A large part of the success of emergency preparedness and disaster management programs in recent years lies in the many close partnerships established with public, private, volunteer, and non-profit organizations. This partnership approach was used very successfully in preparing for and responding to Y2K. Equally important, was the recognized leadership role in emergency preparedness and disaster management already firmly established for FEMA in the United States.

FEMA works daily to reduce risks and strengthen the support systems that help people and communities prepare for and cope with all types of disasters and because of this, it was well understood that FEMA would be the appropriate Agency to lead any needed Federal response and manage any consequences of Y2K or other problems requiring Federal assistance. This is why it was so critical to ensure that FEMA’s own systems were compliant so that it could continue to respond to any and all disasters. Leading up to the century transition, FEMA reached out and provided extensive guidance and assistance to help lead and prepare the nation’s emergency management community for dealing with the possible consequences of Y2K-related incidents.

Year 2000 Issue and Emergency Management

The Y2K hazard was unique in the annals of emergency management and correspondingly presented significant challenges to the emergency management community. Y2K-induced problems had the potential to affect many different systems and geographical areas nearly simultaneously, a situation that FEMA has never before faced. FEMA normally can handle three or four major disasters at the same time, but the prospect of addressing problems in all 56 States and territories was daunting. Other attributes also differentiated Y2K from more familiar natural disaster and emergency risks: Y2K was a premier technological hazard and unprecedented in nature. There was a date certain for its most likely impact and techniques for solving Y2K problems were well known and used in the remediation process. However, during the entire preparatory and remediation phase, several factors undermined the potential to mitigate this threat: the inter-connectivity of computers and computer systems; the difficulty in locating and

replacing embedded chips; the elusiveness of absolute assurances of compliance from vendors and suppliers; resource limitations; and the myriad, variable decisions and priorities of business and government leaders.

Y2K was mostly invisible to the public because it could not be seen or experienced like a tornado, flood, or earthquake. It was difficult to portray the extent to which automation supports daily lives and this added to the difficulty of increasing public awareness to a level sufficient to cause the “average” adult to take prudent preparedness measures, while not causing the concern to reach a level of panic that might result in hoarding of essential resources. We called this balancing act “*the 4 Ps*”: undertaking *prudent planning* without causing *public panic*. Business, government, and citizen group leaders constantly struggled with this dilemma and through its public outreach FEMA played a lead role in helping to educate the public.

Addressing the Year 2000 Challenge

Establishing a formalized command and control structure within which to direct and manage Y2K preparations was key to the success of FEMA’s efforts. Early on a Y2K Executive Secretariat was appointed by the Director to direct and manage all of the Y2K activities in the Agency and representatives were assigned from each Directorate and Office. In addition to overseeing and coordinating the Agency’s preparations, the Executive Secretariat developed recommendations for approval by senior management. Similarly, FEMA supported the President’s Council on Year 2000 Conversion, a Council appointed by the President with representatives from Federal Departments and Agencies and the private sector to guide the nations’ preparations for Y2K. The President’s Council on Year 2000 Conversion led the government’s efforts and served as the command and control organization for the public, private, and international sectors.

FEMA supported the President’s Council in three distinct areas: Emergency Services, Responses to Emergencies, and Emergency Preparedness and Contingency Planning. Like other Federal Agencies, a major priority was to ensure that its own computer-based systems were compliant and report its progress periodically to the President's Council. Another major responsibility, requiring strong leadership, was chairing and coordinating the activities of the Emergency Services Sector (ESS) Working Group of the President’s Council. The ESS Working Group reached out to the organizations working with Federal Agencies in emergency response to increase their awareness of Y2K and assess their readiness to operate normally leading up to, during, and after January 1, 2000. These were the organizations that would be heavily involved in managing the consequences of Y2K-caused events and protecting the public.

In a second area of responsibility, FEMA led the Catastrophic Disaster Response Group, under the Federal Response Plan (FRP), in developing a special supplement to the FRP to deal with the consequences of potential Y2K failures. As such, FEMA ensured that all FRP signatory agencies maintained readiness to respond to all types of hazards and conduct recovery operations according to their FRP responsibilities. As the lead agency for the FRP, FEMA has long-standing experience in providing leadership and command and control in responding to disasters and emergencies. During Y2K preparations, FEMA was responsible for ensuring that FRP

Agencies worked with their partners in the State and local emergency management and fire service communities, to promote awareness and undertake contingency and continuity planning.

In the emergency preparedness and contingency planning area, FEMA mounted an aggressive outreach campaign to the State, local and Indian tribal emergency management and fire service communities to heighten awareness of and sensitivity to Y2K issues and enhance their preparedness levels. To facilitate this outreach, close coordination was established early on and maintained with key constituency groups. FEMA established a strong leadership position early on and engaged in specific activities to help State, local, and Indian tribal emergency management organizations, as well as individuals and families, prepare for Y2K, including:

- Publishing contingency and consequence management planning guidance; conducting Federal-State-local exercises, workshops, and seminars throughout the country; convening seminars focused on preparedness at commercial nuclear power plants; distributing Y2K training materials; conducting Emergency Education Network Y2K broadcasts; and conducting a hazardous materials conference to examine Y2K implications for first responders and emphasize the importance of preparedness and contingency planning for small and medium size chemical facilities.
- Producing public awareness and consumer and personal preparedness information for FEMA employees and the public.
- Providing grants to assist the States and territories with Y2K outreach, public awareness, planning, training, and exercises.
- Coordinating Y2K emergency preparedness assessment surveys of State and local emergency management organizations.
- Conducting briefings for delegations from more than 60 nations.

Conclusion

All of FEMA's Y2K efforts were carried out in full concert with and supported the Agency's "all-hazards" emergency management approach and strong advocacy of community and family preparedness for all types of disasters. The long-established principles of all-hazard emergency management proved to be very helpful in every aspect of FEMA's extensive Y2K activities: outreach and awareness; training; contingency planning guidance; exercises, seminars, and workshops; response planning; and event management. Similar to other organizations, FEMA benefited from a 100% assessment of its own information technology assets. While ensuring Y2K compliance, obsolete technology was eliminated and overall awareness of programs, networks, and their components was increased.

The Y2K experience clearly demonstrated that all aspects of American society, indeed people around the globe, can mobilize to successfully address a common problem; but, it also clearly pointed out that it is very difficult to obtain timely, accurate information on the status of efforts in such a large-scale enterprise. Overall, as FEMA Director Witt said: "While the Y2K 'bug' has been costly and anxiety producing for the nation, there is a silver lining. Y2K - while one of the biggest technological challenges ever faced - also gave us an opportunity to raise awareness about the need for general emergency preparedness across the country. These efforts will go a

long way toward helping the American people be prepared for the inevitable tornado, earthquake, flood or hurricane of the future.”

Often, significant numbers of people do not heed FEMA’s ongoing emergency preparedness message that it pays to be prepared. With Y2K, a record number of people were paying attention. Y2K awareness activities meshed nicely with FEMA’s ongoing efforts to promote risk reduction through Project Impact: Building Disaster Resistant Communities, the national initiative in which communities work with FEMA, State and Indian tribal officials, and private sector partners to assess their particular disaster risk and take pro-active steps to reduce potential damage in the future. The Y2K experience helped strengthen existing working relationships between FEMA and State and local governments; resulted in new working relationships being established; boosted the Agency's outreach to the private sector; and provided an opportunity to update emergency and contingency planning.

What started as a daunting task ended on a positive note as the new century dawned with very few problems encountered. This success can be attributed to strong, proactive leadership; a focused mission; and the concerted efforts of many individuals and organizations in both the private and public sectors to manage the challenge.